

OPERATIONS ON THE CACHE LA POUUDRE RIVER

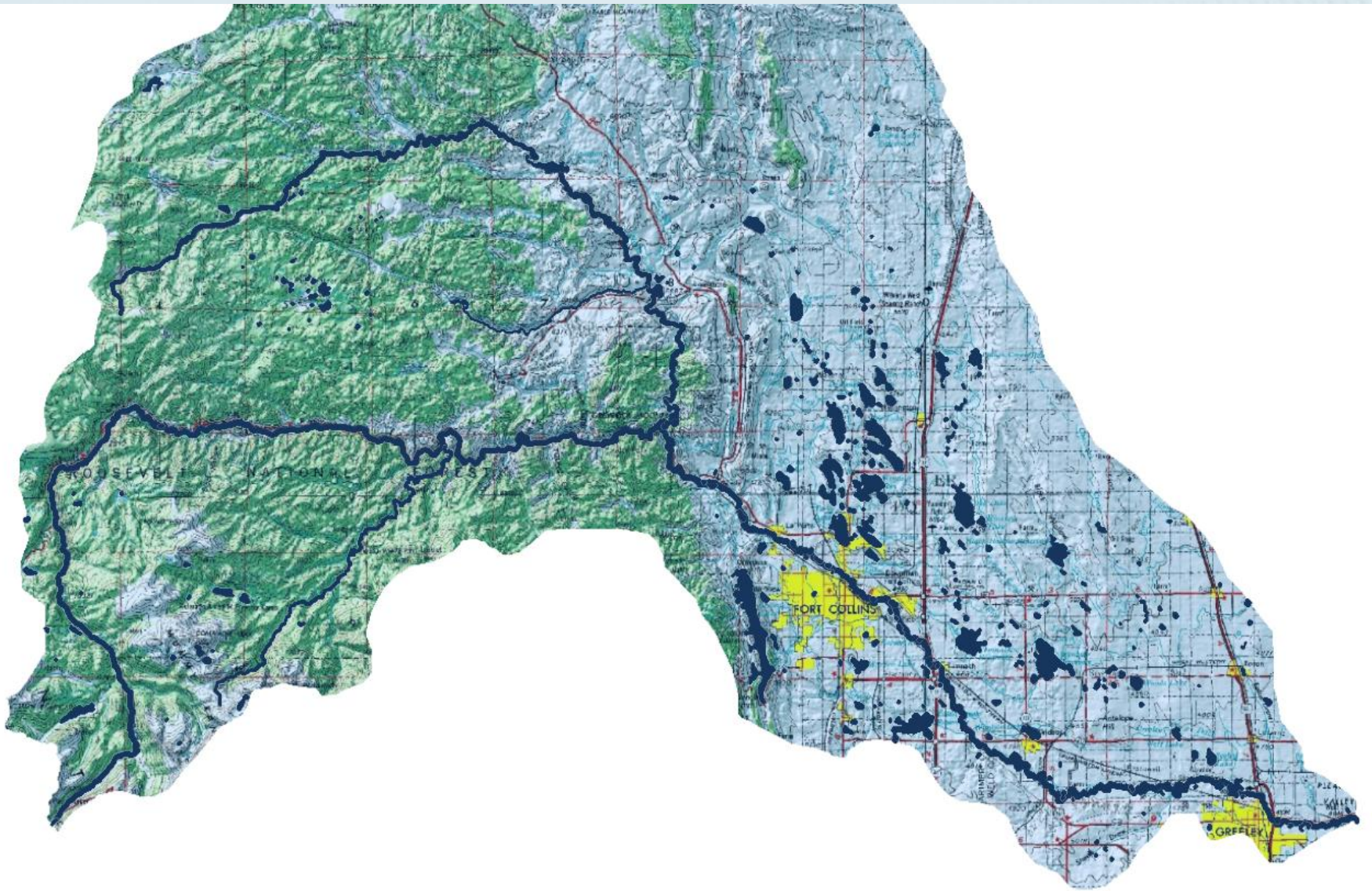


Photo Credit Mountain Anglers www.mountainanglers.com

FISCHER, BROWN, BARTLETT & GUNN, P.C.

BASIN OVERVIEW

- Drains nearly 2000 square miles, mostly in Larimer and Weld Counties
- Mainstem originates at Poudre Lake in Rocky Mountain National Park
- Significant Tributaries:
 - North Fork
 - South Fork
 - Dry Creek
 - Boxelder Creek



Source: USGS
Source: NASA, NGA, USGS
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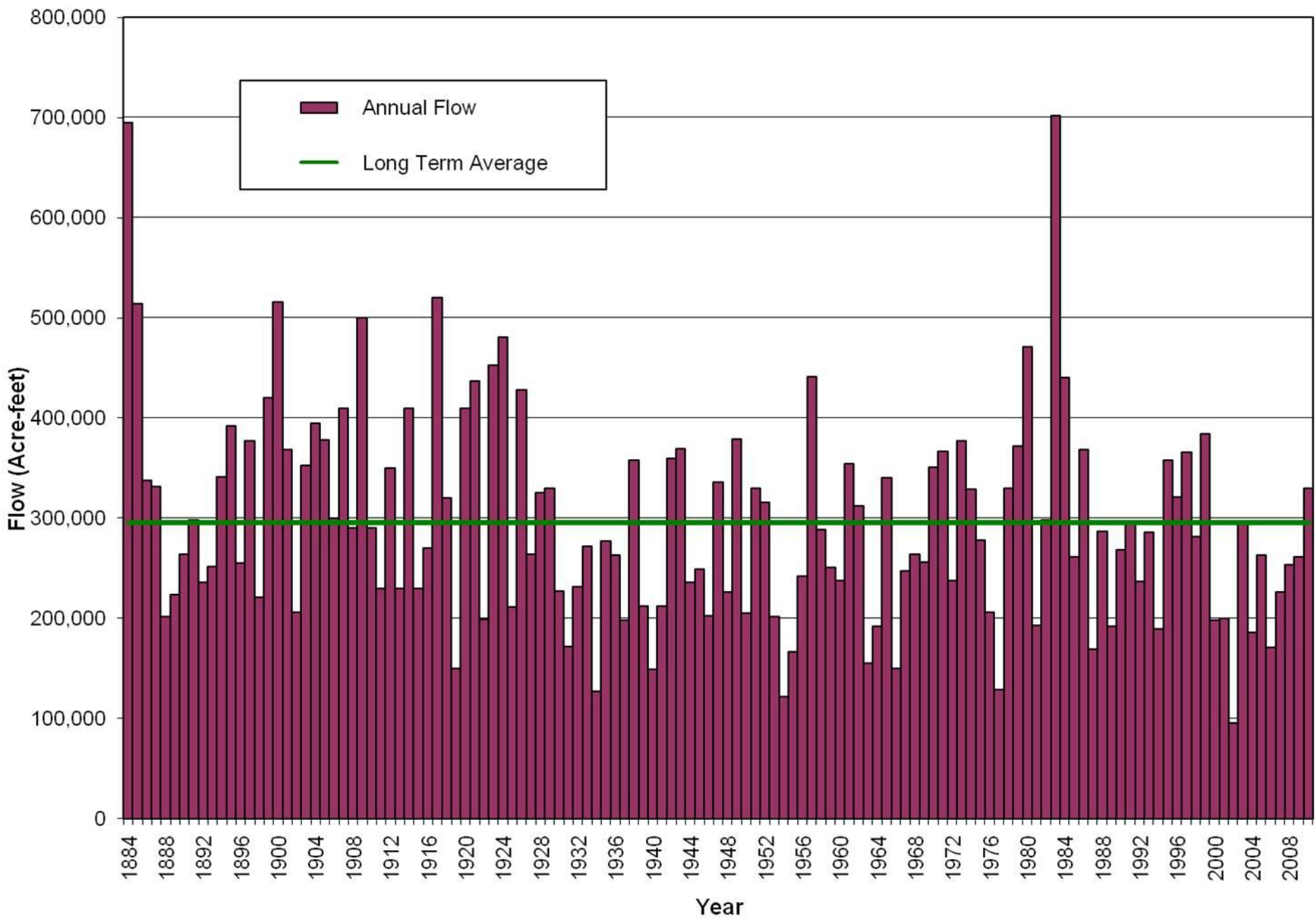
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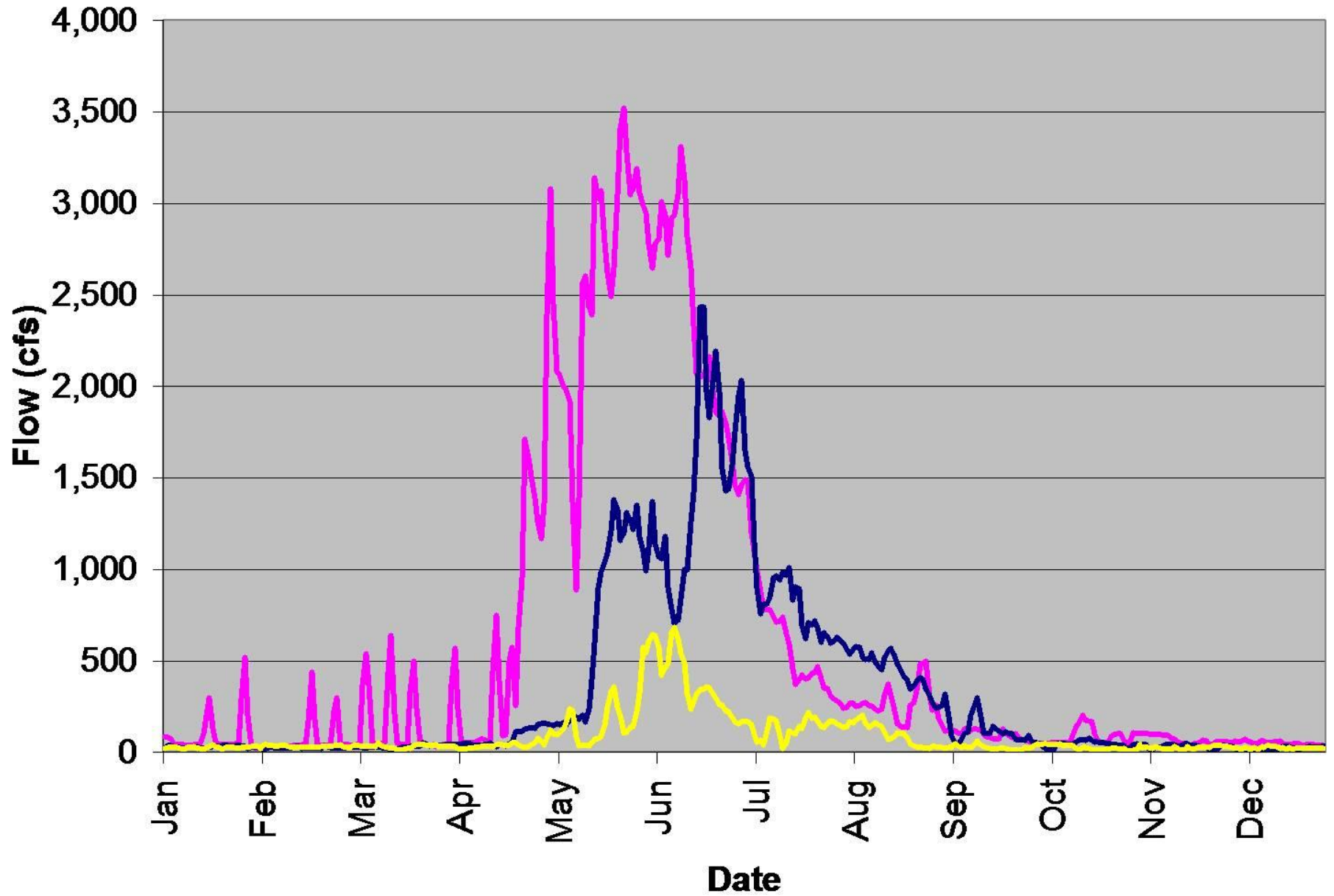
Native Flows

- Average flows = 300,000 AF
- Highest flow = 700,000 AF
- Lowest flow = 100,000 AF

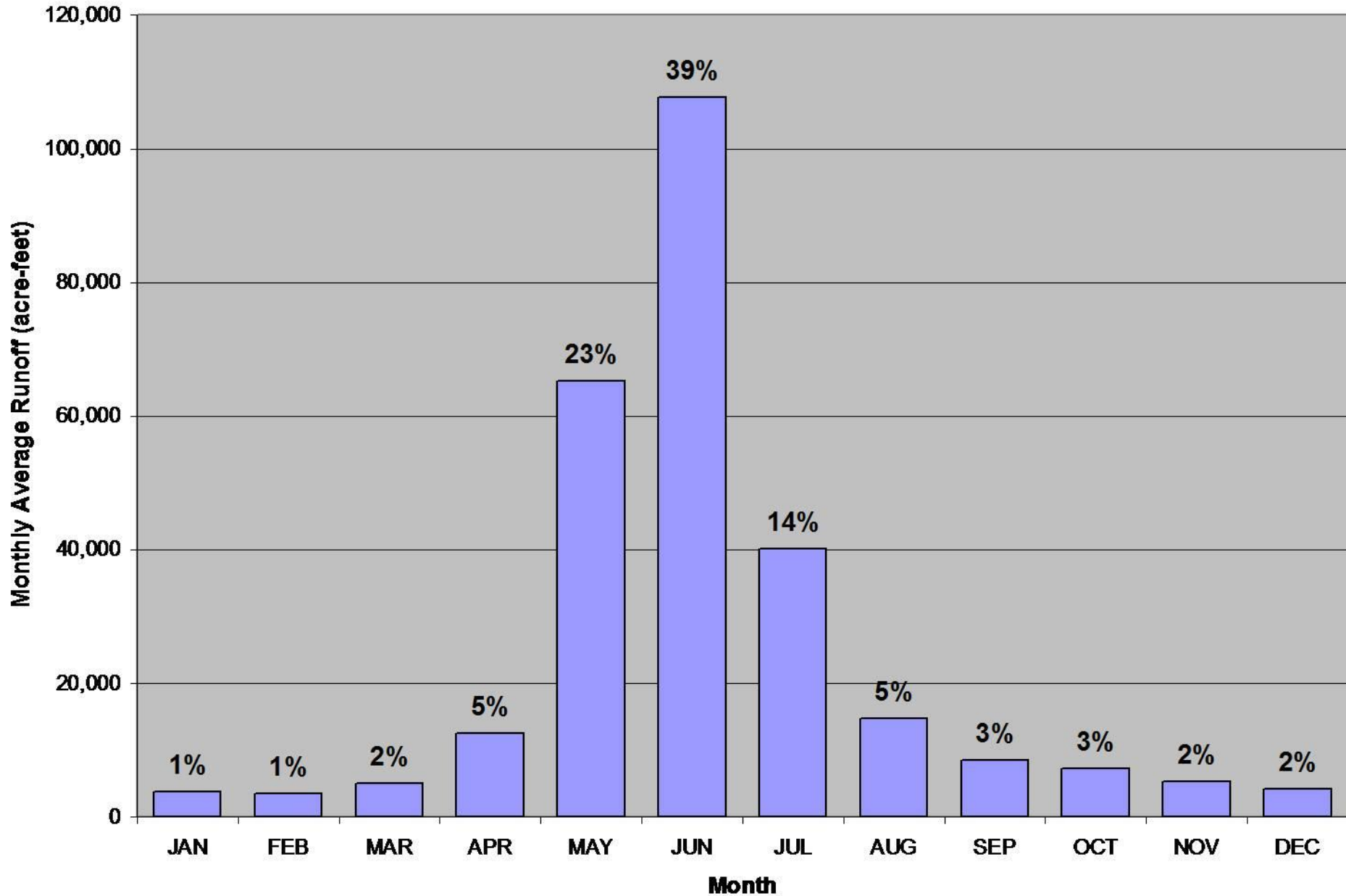
Cache la Poudre River Annual Virgin Flows at the Mouth of the Canyon



Poudre River Flows



Cache la Poudre River Monthly Average Native Runoff at the Mouth of the Canyon (1950-2005)



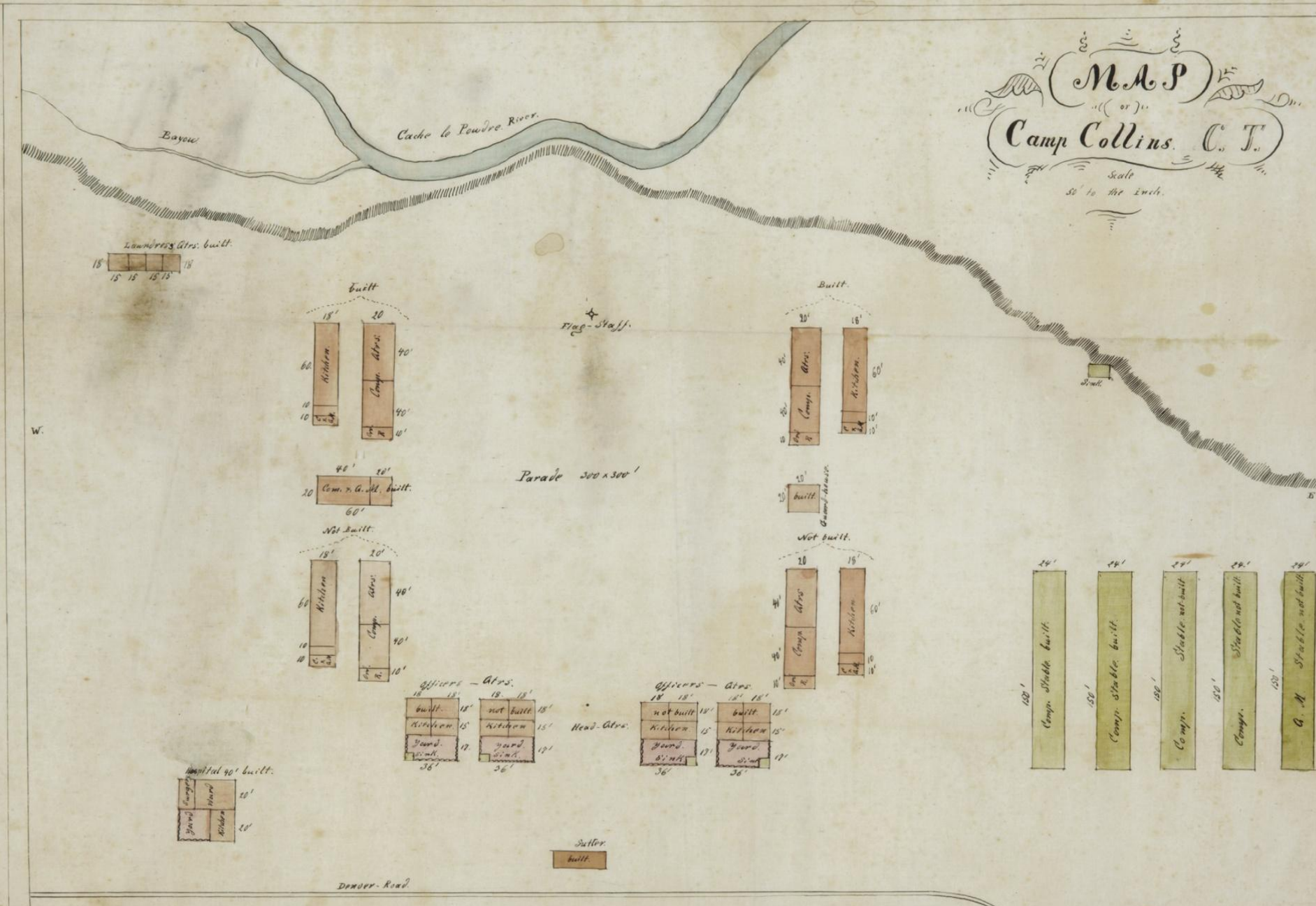
EARLY HISTORY – Developing the Resource

Overview

- 1860s – 1880s: Ditch Construction
- 1880s – 1900s: Reservoir Construction
- 1890s – 1910s: Construction of Initial Transbasin Diversion Structures
- 1930 – 1950s: Colorado Big-Thompson Project Development

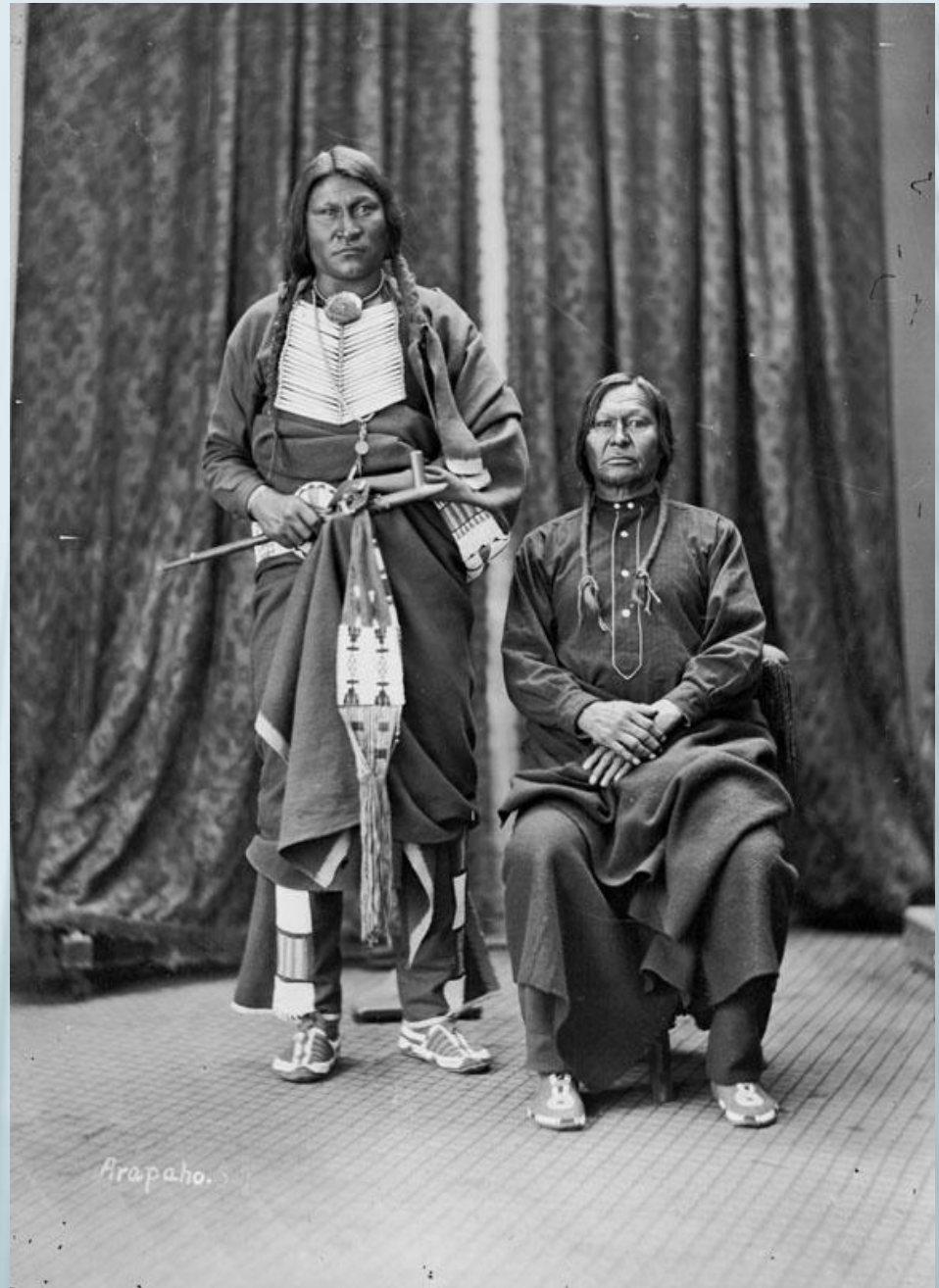
CAMP COLLINS

Collins, Caspar. Wever, "Camp Collins." Caspar Collins Map Collection, 2003.
 [http://lib.colostate.edu/collins/item.php?item=0] (Accessed April, 20, 2011)





Chief Friday – Arapaho 1869



Chief Friday & Chief Crazy Bull 1873

1860s – 1870s: Ditch Construction

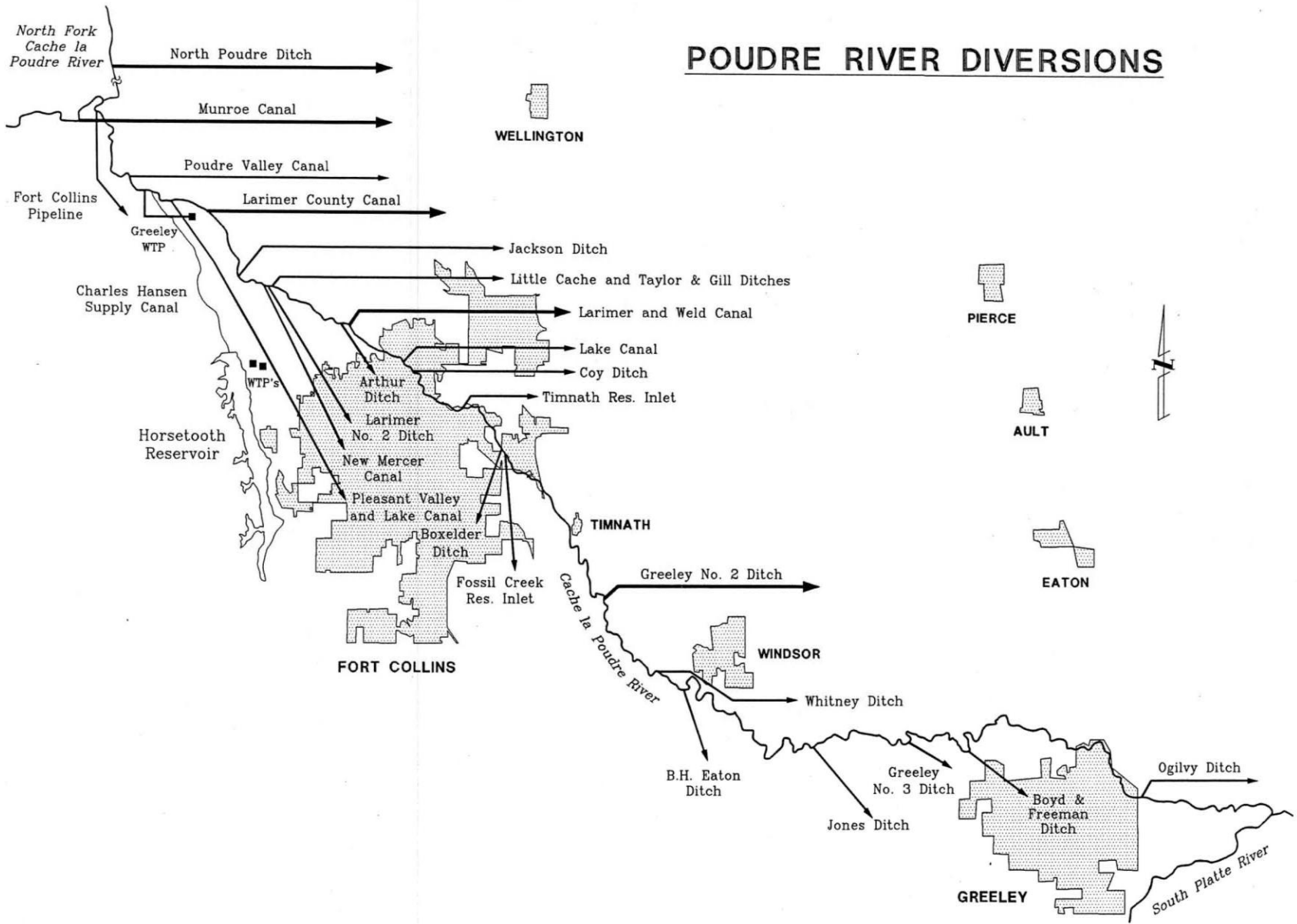
■ Smaller Private Bottomland Ditches

- Yeagar Ditch (priority #1) June 1, 1860
- Dry Creek (Jackson Ditch) June 10, 1861
- Whitney Ditch Sept. 1, 1862
- B.H. Eaton Ditch April 1, 1864
- John G. Coy Ditch April 10, 1865
- J.R. Brown Ditch May 1, 1865
- W.R. Jones Ditch Sept. 1, 1867

1860s – 1880s: Ditch Construction

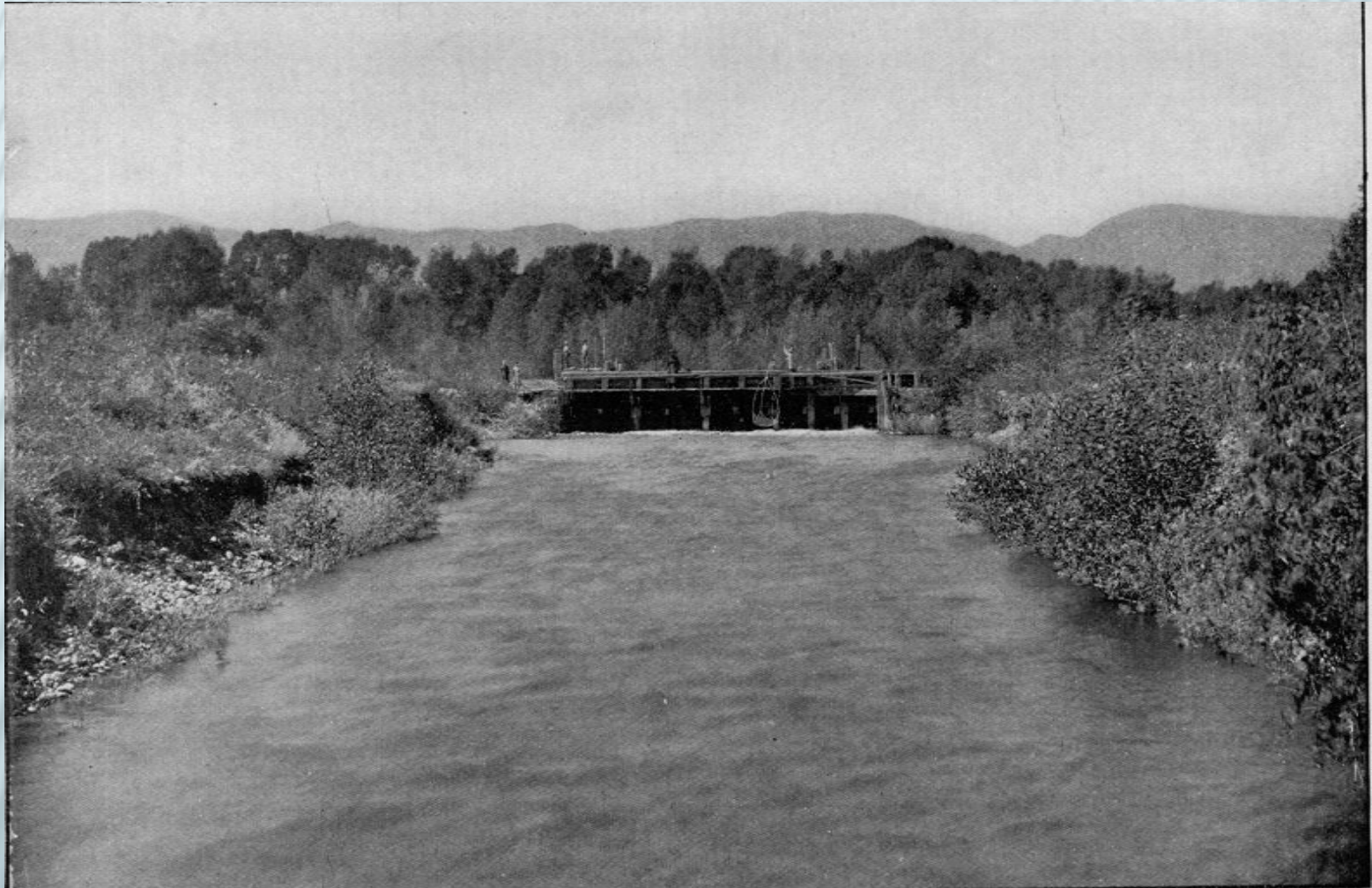
- Larger Mutual Ditch Systems -- the “Big 4”
 - New Cache La Poudre Irrigating Company
Greeley No. 2 Ditch
 - Larimer and Weld Irrigation Company
Larimer and Weld Canal
 - The Water Supply and Storage Company
Larimer County Canal
 - North Poudre Irrigation Company
North Poudre Canal / Munroe Canal

POUDRE RIVER DIVERSIONS



HEADGATE OF LARIMER AND WELD CANAL

PHOTO BY DAVID BOYD,



1880s – 1900s: Reservoir Construction

- Commenced in earnest in early 1880s
- Total storage volume today exceeds 250,000 AF in Basin
- “Big 4” Reservoir Companies -- Plains Reservoirs
 - Cache La Poudre Reservoir Company
 - Timnath Reservoir (aka Cache La Poudre Reservoir)
 - Windsor Reservoir Company / Larimer and Weld Reservoir Co.
 - Includes: “Big” Windsor, Cobb and Douglas Reservoirs
 - The Water Supply and Storage Company
 - Includes: Rocky Ridge, WSSC Reservoirs 2 & 3
 - North Poudre Irrigating Company
 - Includes: Halligan Reservoir and Fossil Creek Reservoir

BUILDING FOSSIL CREEK RESERVOIR

CIRCA 1902

PHOTO COURTESY OF CITY OF GREELEY MUSEUMS, H.E. JOHNSON COLLECTION





1880s – 1900s: Reservoir Construction

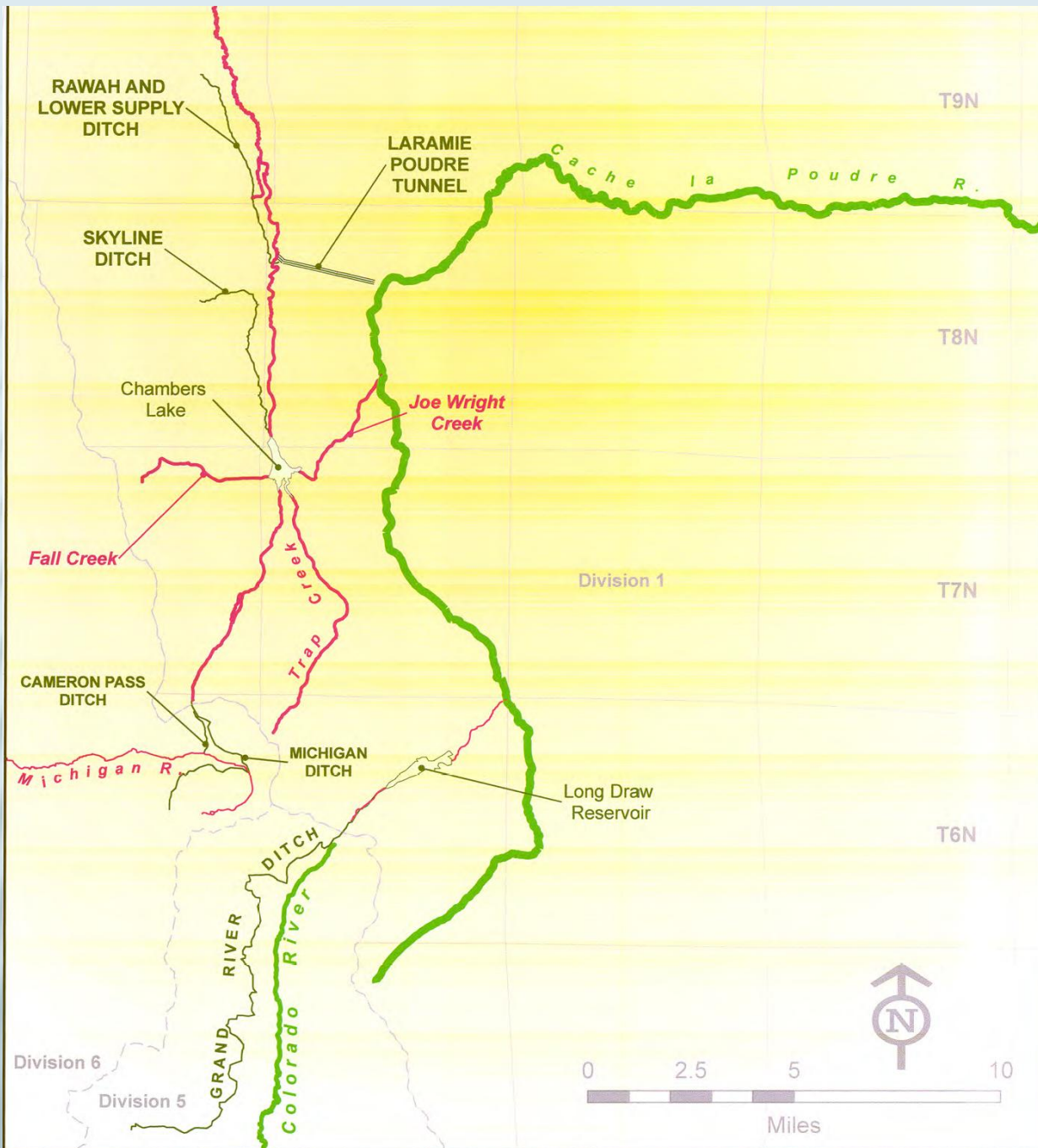
- Mountain Reservoirs Reservoirs

- Main Stem

Chambers Lake	(Water Supply and Storage Company)
Long Draw Reservoir	(Water Supply and Storage Company)
Joe Wright Reservoir	(City of Fort Collins)

- North Fork

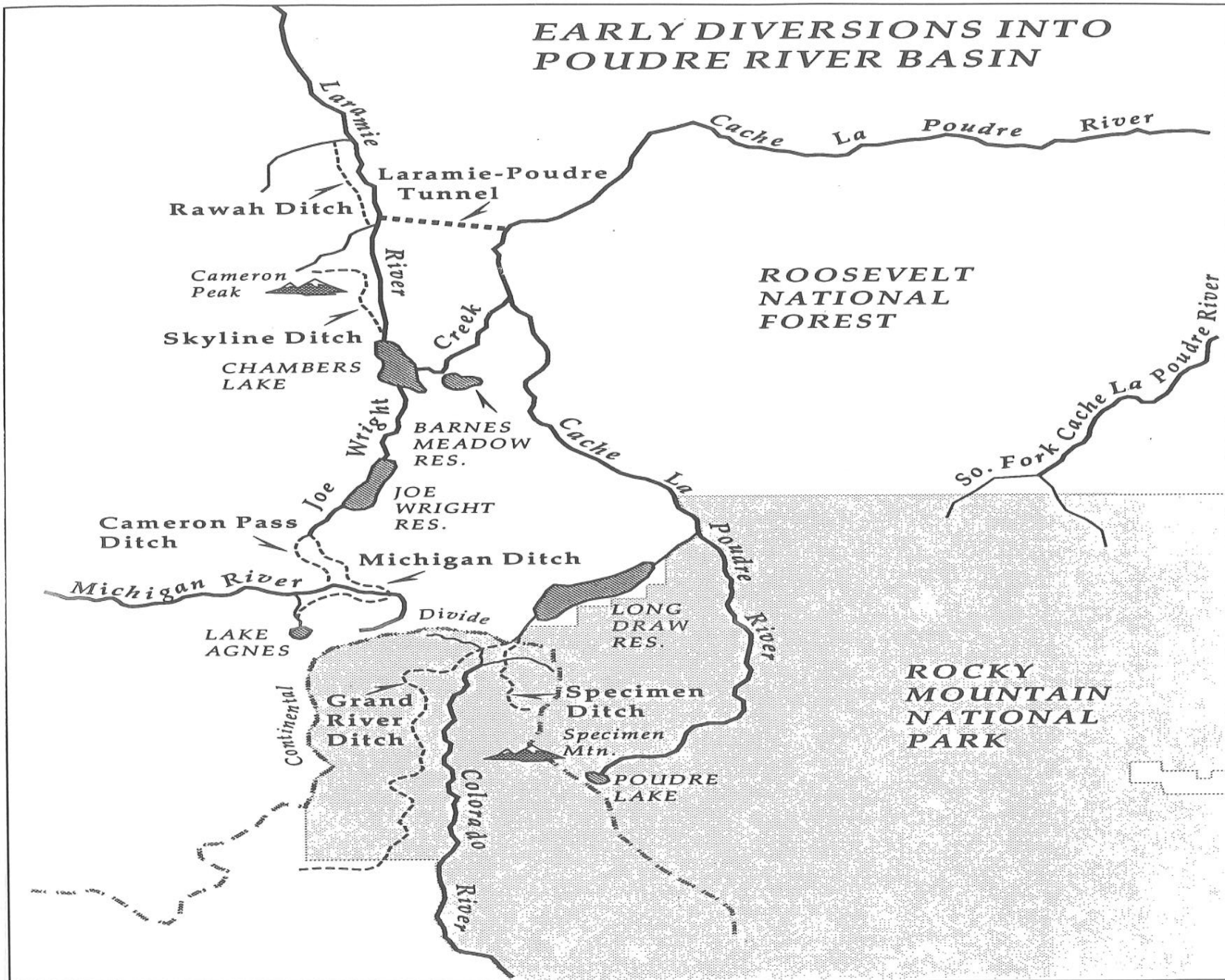
Worster Reservoir	(Divide Canal Company)
Halligan Reservoir	(North Poudre)
Seaman Reservoir	(City of Greeley)



Construction of Initial Transbasin Diversion Structures

- Grand River Ditch
- Laramie Poudre Tunnel
- Michigan Ditch
- Several Smaller Structures

EARLY DIVERSIONS INTO POUDRE RIVER BASIN



SKYLINE DITCH CIRCA 1897

PHOTO FROM DAVID BOYD

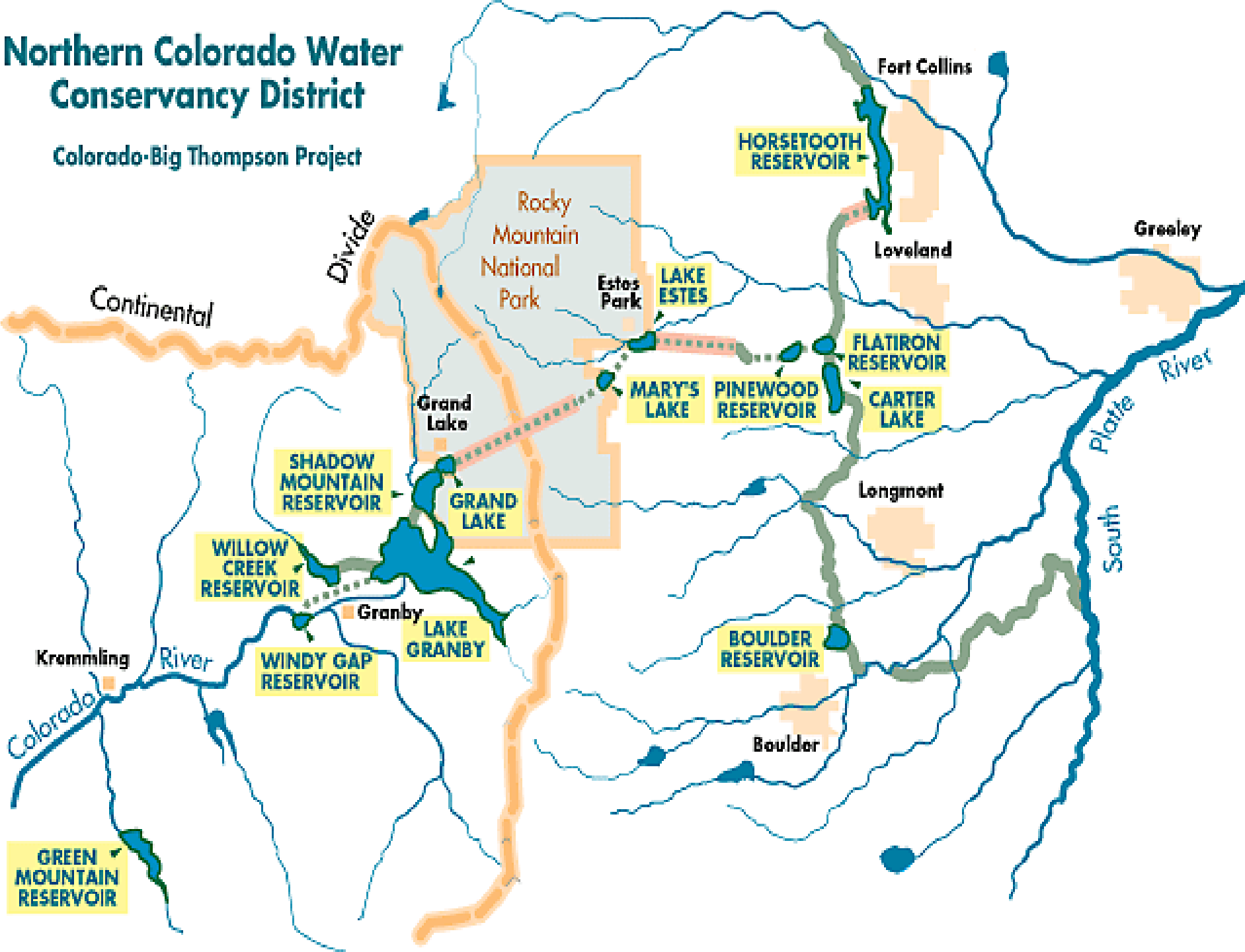


1930s – 1950s: Colorado-Big Thompson Project Development

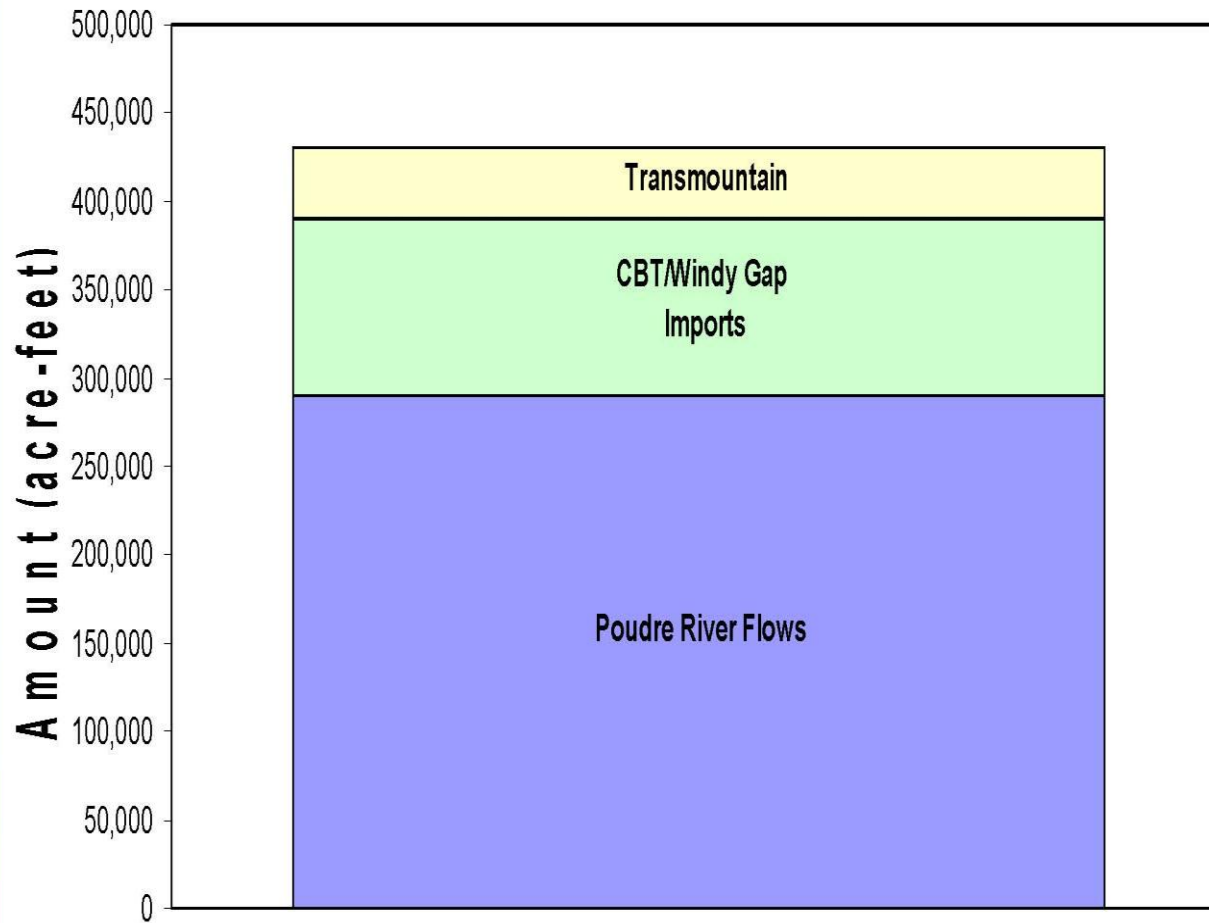
- C-BT Project Constructed from 1938 - 1957
 - Brings about 100,000 AF to Basin annually
- Horsetooth Reservoir and Hansen Supply Canal
- C-BT waters are “fungible” and widely traded / leased
- North Poudre – 40,000 Units
 - Diverted by exchange at Munroe Canal and North Poudre Canal

Northern Colorado Water Conservancy District

Colorado-Big Thompson Project



Average Annual Poudre Basin Supplies



Poudre Basin General Adjudication Decrees

Three Major General Adjudications:

- Civil Action 320 (1882)

 - 108 water rights for 65 structures

 - Senior direct flow water rights

- Civil Action 1591 (1904)

 - 61 storage rights for 45 structures

 - Initial Reservoir Adjudication

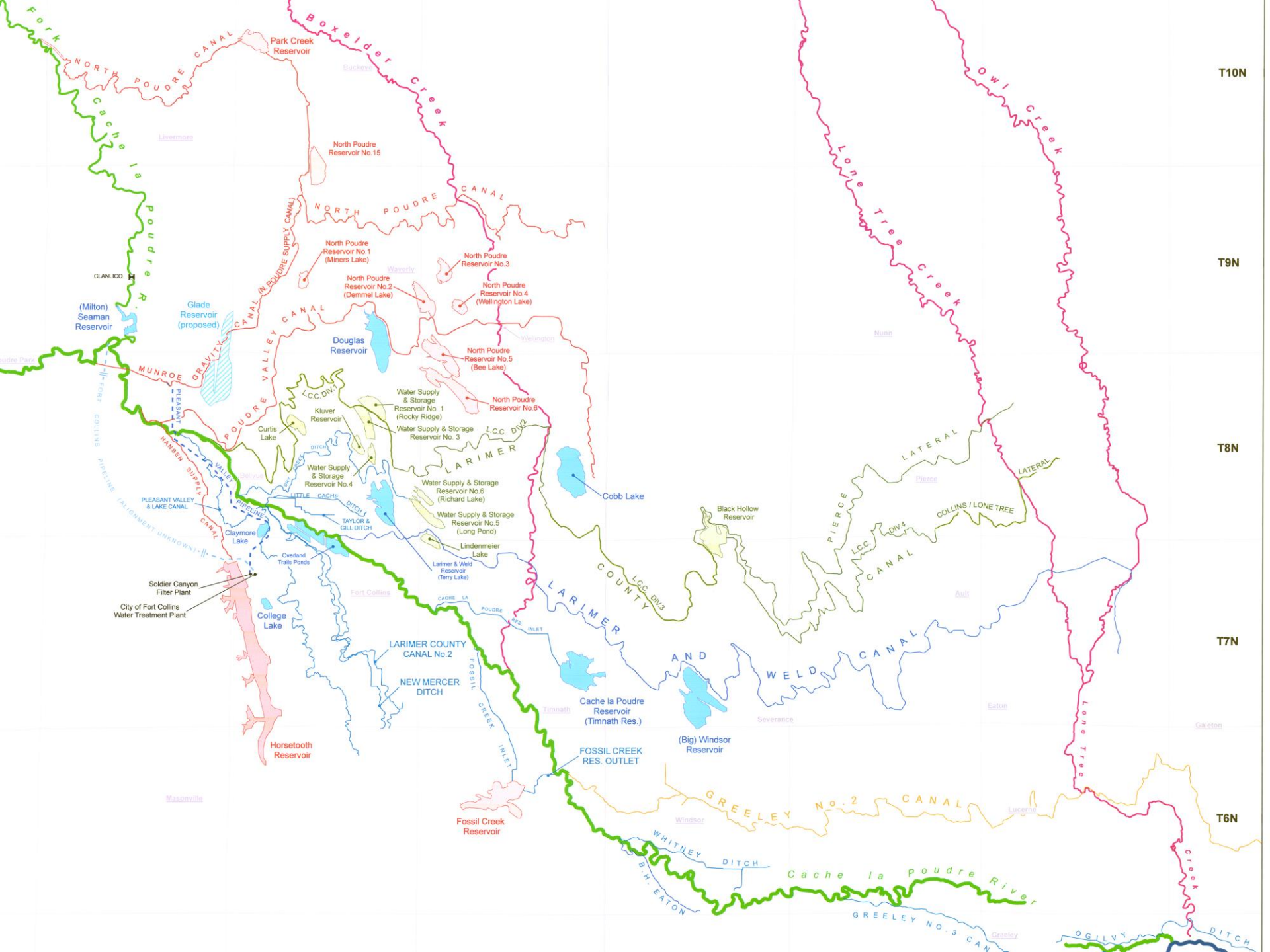
- Civil Action 2031 (1921)

 - 61 storage rights for 45 structures

 - First true supplemental adjudication

Managing the Resource — Cache La Poudre Administration

- Senior Direct Rights Generally Downstream
 - Greeley #3 Ditch (Greeley Irrigation Company)
 - B.H. Eaton Ditch
 - Whitney Ditch
 - Greeley No. 2 (New Cache La Poudre Irrigating Company)
- Junior Direct Rights Generally Upstream
 - North Poudre Canal
 - Larimer and Weld Canal
- Exchanges Keep Juniors “In” When Call Comes On
 - Fossil Creek Exchange
 - North Poudre C-BT Exchanges



T10N

T9N

T8N

T7N

T6N

Park Creek Reservoir

North Poudre Reservoir No.15

North Poudre Reservoir No.1 (Miners Lake)

North Poudre Reservoir No.3

North Poudre Reservoir No.2 (Demmel Lake)

North Poudre Reservoir No.4 (Wellington Lake)

Douglas Reservoir

Water Supply & Storage Reservoir No.1 (Rocky Ridge)

Water Supply & Storage Reservoir No.3

Water Supply & Storage Reservoir No.6 (Richard Lake)

Water Supply & Storage Reservoir No.5 (Long Pond)

Larimer & Weld Reservoir (Terry Lake)

Cobb Lake

Black Hollow Reservoir

Cache la Poudre Reservoir (Timnath Res.)

(Big) Windsor Reservoir

Fossil Creek Reservoir

(Milton) Seaman Reservoir

Glade Reservoir (proposed)

Soldier Canyon Filter Plant

City of Fort Collins Water Treatment Plant

Horsetooth Reservoir

LARIMER COUNTY CANAL No.2

NEW MERCER DITCH

GREELEY No.2 CANAL

Cache la Poudre River

GREELEY No.3 CANAL

OGILVY DITCH

NORTH POUDRE CANAL

NORTH POUDRE CANAL

POUDRE VALLEY CANAL

LARIMER AND WELD CANAL

PIERCE CANAL

GREELEY CANAL

WHITNEY DITCH

B.H. EATON

Boxelder Creek

Buckeroo

Waxberry

Wellington

Nunn

Pierce

Ault

Severance

Eaton

Galeton

Livermore

CLANLICO

Claymore Lake

Kliver Reservoir

Curtis Lake

PLEASANT VALLEY & LAKE CANAL

Overland Trails Ponds

College Lake

Fort Collins

CACHE LA POUDRE RES. INLET

LARIMER COUNTY CANAL No.1

LARIMER COUNTY CANAL No.3

LARIMER COUNTY CANAL No.4

LARIMER COUNTY CANAL No.5

LARIMER COUNTY CANAL No.6

LARIMER COUNTY CANAL No.7

LARIMER COUNTY CANAL No.8

LARIMER COUNTY CANAL No.9

LARIMER COUNTY CANAL No.10

WINDY HOLLOW CANAL

HANSEW SUPPLY CANAL

VALLEY PIPELINE

PIPELINE ALIGNMENT UNKNOWN

FOSSIL CREEK INLET

FOSSIL CREEK INLET

FOSSIL CREEK INLET

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FOSSIL CREEK INLET

MASONVILLE

WINDSOR

WINDSOR

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WINDSOR

Managing the Resource -- Era of Cooperation

- Cache La Poudre Water Users Association (1933)

 - Created as organization to promote C-BT project

 - Comprised of all major water users in the Basin

- Well Integration

 - Civil Action 11217 – Coffin Decree (1953)

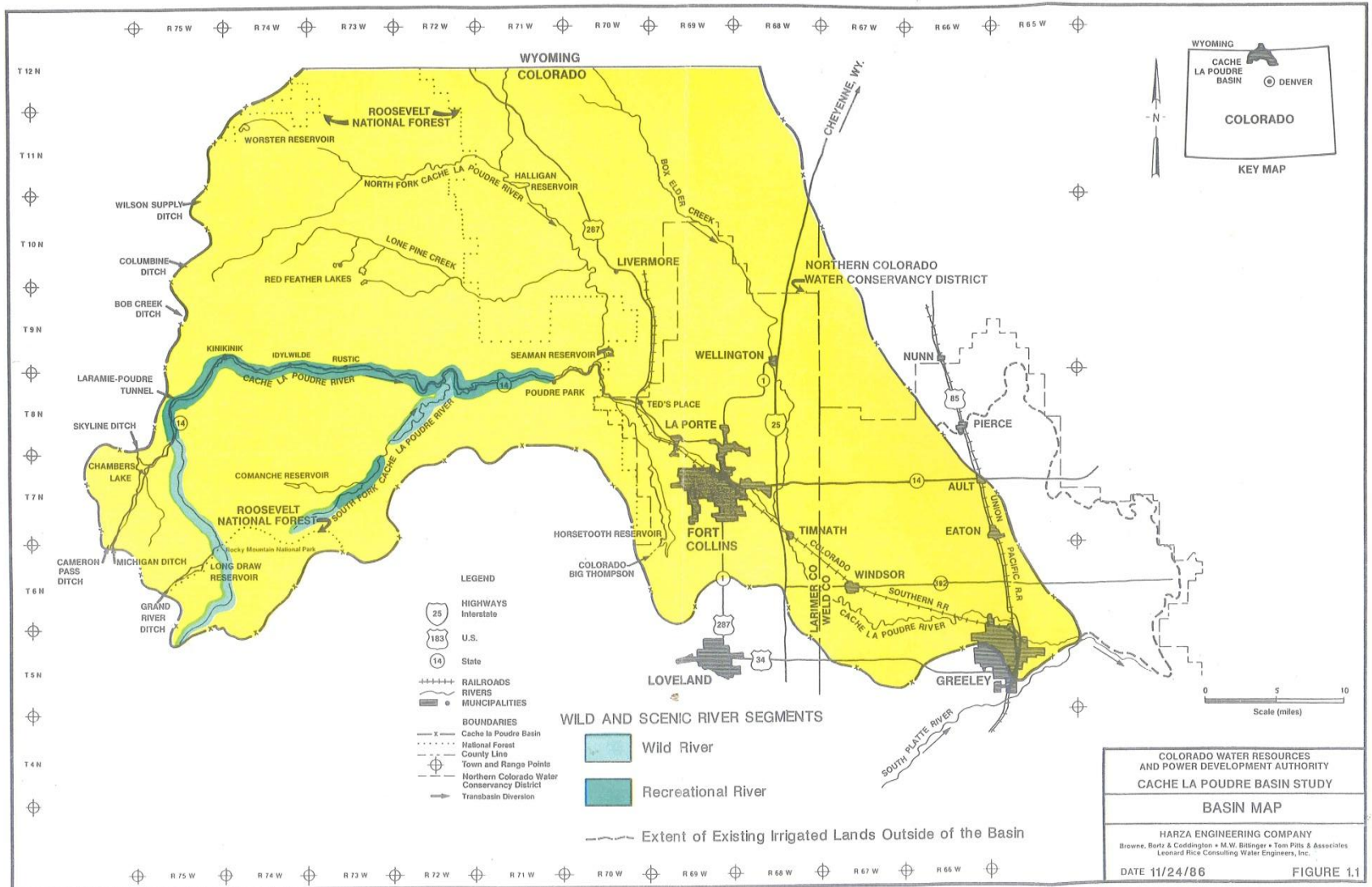
 - Cache La Poudre Augmentation Plan (entered 1975)

- Wild and Scenic Designation (1985)

 - Wild and Scenic Compromise brokered by Hank Brown

 - Decree entered in 86CW367

WILD AND SCENIC RIVER SEGMENTS



Managing the Resource – Era of Cooperation

In-Channel Issues

- Fort Collins In-Channel Recreation Right

 - First in-channel diversion

 - City of Thornton v. City of Fort Collins*, 830 P.2d 915

- Bellevue Fish Hatchery Right

 - Case 85CW201

 - 50 c.f.s. claim for flows into Watson Lake (near Laporte)

 - Exchange “bottleneck”

- CWCB Instream Flow Rights

 - Several claims in Poudre headwaters and on North and South Forks.

Meeting Changing Needs

Significant Local Municipal and Industrial Water Users

- City of Fort Collins

- City of Greeley

- Town of Windsor

- Tri-Districts

 - East Larimer County Water District

 - North Weld County Water District

 - Fort Collins Loveland Water District

- Platte River Power Authority

- Breweries!

 - Budweiser

 - New Belgium

 - Odells

Meeting Changing Needs

Significant Decreed Municipal Change Cases

- Thornton WSSC change: 86CW401, 86CW402, 86CW403, 87CW332

Thornton v. Bijou, 926 P.2d 1.

Change of 283 shares in the Water Supply and Storage Company

- Fort Collins: 92CW231.

Change of “South Side” Ditch Companies Shares

Arthur Irrigation Company

Larimer County Canal No. 2 Irrigating Company

New Mercer Company

Warren Lake Reservoir Company

Meeting Changing Needs -- Future Challenges

Pending Municipal Change Cases

- Fort Collins: 05CW323 (“2nd generation” South Side Ditch change case)
- East Larimer County Water District: 03CW422 (WSSC change)
- North Weld County Water District: 03CW421 (WSSC change)
- City of Greeley: 06CW258 (Change of Tunnel Water Rights)
- City of Greeley: 07CW190 (WSSC change)

Future Change Cases?

United Case 02CW404/04CW442 signaled more to come

Meeting Changing Needs -- New Proposed Projects

Northern Integrated Supply Project “NISP”

Proposal to supply water to 15 Front Range Entities

Basically a large exchange from SP near Kersey to Poudre Valley Canal

Two Reservoirs to complete Exchange: Galeton and Glade

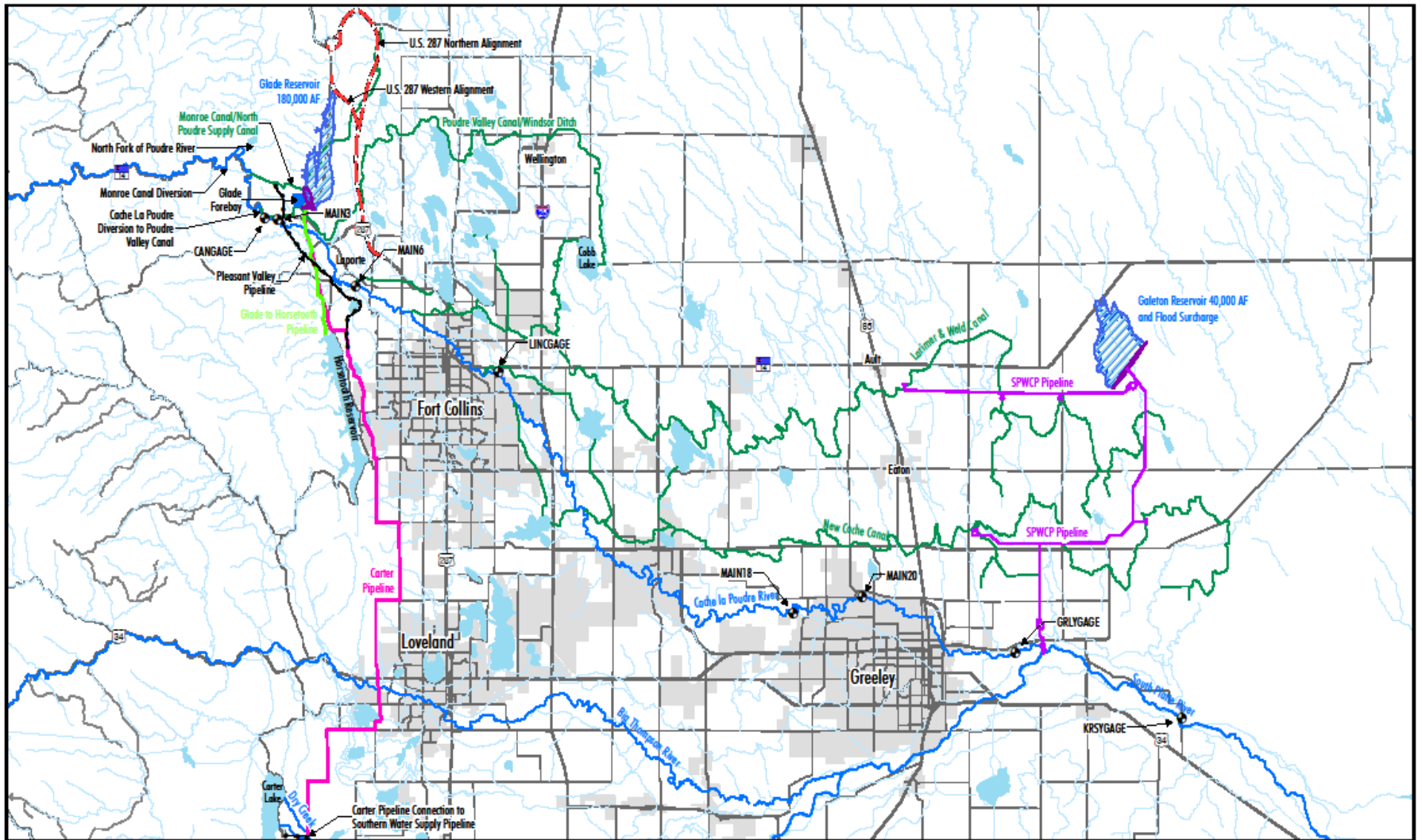
Galeton: 45,000 AF Capacity; in Weld County

Glade: 170,000 AF Capacity; in Larimer County

Glade Reservoir

Alternate place of storage for Grey Mountain Reservoir (80CW335)

Alternate place of Storage decreed by NCWCD Decree in 03CW405



- Proposed Reservoirs
- Canals
- Major Rivers
- Minor Rivers
- Stream Gauge or MODSIM Node Location
- Existing Pipelines

DRAFT

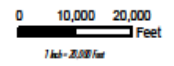


Figure 2-2
Alternative 2 (Proposed Action) -
Glade Reservoir and South Platte
Water Conservation Project (SPWCP)

Prepared for: U.S. Army Corps of Engineers
File: 2701-Federal_Alternative_FIG2.mxd (1P)
August 21, 2006

WORTHINGTON WHITTREDGE

ON THE CACHE LA POUDRE RIVER 1876



Amon Carter museum,

Fort Worth, Texas